

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-29 are pending in the present application. Claims 5 and 6 are canceled, Claims 1-4 are amended, and Claims 28 and 29 are added by the present amendment, all without the introduction of any new matter. Claims 7-27 stand withdrawn in response to a prior restriction requirement.

In the outstanding Office Action, Claims 5 and 6 were apparently added to the withdrawn claims; Claim 2 was objected to; Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by JP 10-042181 to Honma; Claim 4 was rejected under 35 U.S.C. § 103(a) as unpatentable over Honma in view of U.S. Patent No. 5,905,533 to Hidari; and Claims 2 and 3 were indicated as allowable if rewritten in independent form.

Applicant thanks the Examiner for the indication of allowable subject matter. Accordingly, new Claims 28 and 29 include the features of Claims 2 and 3, respectively, rewritten in independent form to include the features of Claim 1 and amended to remove minor inconsistencies. It is believed no new matter is added.

Accordingly, it is respectfully submitted that new Claims 28 and 29 are allowable.

Regarding the objection to Claim 2, Claim 2 is amended to provide proper antecedent basis for the terms noted in the outstanding Office Action. Accordingly, it is respectfully requested that objection be withdrawn.

Claim 1 was rejected under 35 U.S.C. § 102(e) as anticipated by Honma. Applicant respectfully traverses that rejection.

Amended Claim 1 is directed to an image processing circuit of an image input device that performs a predetermined image processing of an image photographed by an image pickup device in the image input device. The image processing circuit includes a real time

processing unit in which a predetermined general image processing including at least pixel interpolation of a pixel data being photographed by the image pickup device and inputted sequentially is performed by real time processing in which an intermediate image is not stored in a main memory until a final display image is prepared using a line memory.

Further, the circuit includes a main memory that stores a pixel data outputted from the real time processing unit, in image frame units, and a central control unit in which with respect to the image temporarily stored in the main memory, exceptional image processing except for the general image processing is executed as a software program processing, and then stored in the main memory. The real time processing unit has a selector for selecting the pixel data being photographed by the image pickup device and inputted subsequently, and the pixel data of the image temporarily stored in the main memory.

This arrangement advantageously results in highly efficient performance of image processing.<sup>1</sup>

Applicant respectfully submits that Honma does not teach or suggest real time processing in which an intermediate image is not stored in a main memory until a final display image is prepared using a line memory.

More specifically, Honma discloses that the digital signal processing section performs gamma processing and other signal corrections on the video signal outputted from CCD, and then the video signal is recorded on the recording portion.<sup>2</sup> Further, Honma describes that image data is transmitted to the memory at the time of the photography mode of a camera in the digital signal processing section.<sup>3</sup> In addition, Honma indicates that the image raw data on the memory is read by the digital signal processing section and predetermined image processing is carried out.<sup>4</sup>

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<sup>1</sup> Specification at page 28, line 20, to page 29, line 4.

<sup>2</sup> Honma at paragraph [0005].

<sup>3</sup> Honma at paragraph [0024].

<sup>4</sup> Honma at paragraph [0052].

Thus, as stated by Honma at paragraph [0024], after transmitting image data to the memory, the digital signal processing section performs image processing such as WB, AE correction and gamma correction while transmitting and receiving data between the digital signal processing section and the memory. That is, Honma does not teach or even suggest a real time processing unit for performing a predetermined general image processing by real time processing in which an intermediate image is not stored in a main memory until a final display image is prepared using a line memory.

In contrast thereto, according to the invention as recited in amended Claim 1, a general image processing is performed by a real time processing in which an intermediate image is not stored in a main memory unit a final display image is prepared using a line memory not the main memory, and further when only specific exceptional image processing is executed as software program processing in CPU (corresponding to the digital signal processing section of Honma), a general image processing after the exceptional image processing is performed at high speed by the real time processing unit, thereby achieving a significant speedup as compared with the case of executing as a software program processing.

Thus, applicant respectfully submits that Honma does not describe the provision of a real time processing unit for performing a real time processing in which “an intermediate image is not stored in a main memory until a final display image is prepared using a line memory,” as in amended Claim 1. Moreover, Honma, in which no real time processing is present, does not anticipate the present invention.

Accordingly, it is respectfully submitted that independent Claim 1 and claims depending therefrom patentably define over Honma.

Claim 4 was rejected under 35 U.S.C. 103(a) as unpatentable over Honma in view of Hidari. Applicant also respectfully traverses that rejection.

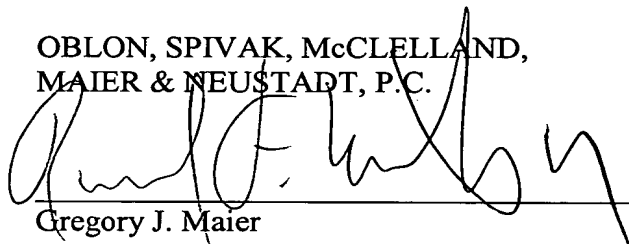
Claim 4 depends from Claim 1, which as discussed above is believed to patentably define over Honma. Applicant respectfully submits that Hidari also does not teach or suggest the features of the independent claims. Thus, applicant respectfully requests that rejection be withdrawn.

Accordingly, it is respectfully submitted that independent Claim 1 and claims depending therefrom are allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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